

REMARKS

An aspect of the present invention is directed to a method of uptaking, or storing, or releasing, or uptaking and storing, or uptaking and releasing, or storing and releasing or uptaking, storing and releasing at least one gas wherein the gas is uptaken, or stored, or released, or uptaken and stored, or uptaken and released, or stored and released or uptaken, stored and released by an agent comprising a metallo-organic framework material comprising pores and at least one metal ion and at least one at least bidentate organic compound, which is bound to said metal ion; wherein the metallo organic framework material comprising pores exhibits a specific surface area, as determined via adsorption (BET according to DIN 66131) of larger than 2000 m<sup>2</sup>/g.

The rejection of claims 1-14 under 35 U.S.C. § 102(b) over either Fujiwara (EP 0727608) or Seki et al. (JP 09-227572, Seki) is respectfully traversed.

Neither Fujiwara nor Seki describe the method, as claimed in claim 1.

Fujiwara describes a gaseous adsorbing-retaining agent (see Abstract). It is noted that Fujiwara specifically describes adsorbing methane, (See Figs. 3-10), ethane, propane, butane, nitrogen, and oxygen using said agent (See Figs. 11-13). Finally, Fujiwara describes a gaseous adsorbing-retaining agent which contains Cu, Mo, Cr, Rh (See pp. 7-12). However, Fujiwara states that when a gaseous adsorbing-retaining agent is used for adsorbing gases its surface area should not be greater than 1500 m<sup>2</sup>/g (p. 10, ll. 30-33). This is in contrast to that which is claimed in claim 1.

Seki describes a gaseous adsorbing-retaining agent that contains a metal complex ([0013]), a bidentate organic ligand ([0012]); which is shown to adsorb methane ([0023], Fig. 2). But Seki is silent with respect to the specific surface area of the gasesous adsorbing-retaining agent. This too is in contrast with that which is claimed in claim 1.

It is noted that a claimed feature that distinguishes the claimed invention over the disclosures of Fujiwara and Seki pertains to the fact that "the metallo organic framework material comprising pores exhibits a specific surface area, as determined via adsorption (BET according to DIN 66131) of larger than 2000 m<sup>2</sup>/g and devices that are capable of performing said method" (see claim 1).

Accordingly, the claimed invention is not anticipated in view of the disclosures of either Fujiwara or Seki. It is respectfully requested that the Examiner withdraw this rejection.

Additionally, the disclosures of Fujiwara, Seki, or both Fujiwara and Seki do not render the claimed invention obvious. As noted above, Seki does not suggest a particular surface area, but Fujiwara states that when a gaseous adsorbing-retaining agent is used for adsorbing gases its surface area should not be greater than 1500 m<sup>2</sup>/g (p. 10, ll. 30-33). This is in contrast to that which is claimed in claim 1. In fact, this may be construed as a suggestion not to employ a "metallo organic framework material comprising pores [which] exhibits a specific surface area, as determined via adsorption (BET according to DIN 66131) of larger than 2000 m<sup>2</sup>/g and devices that are capable of performing said method" in a method "of uptaking, or storing, or releasing, or uptaking and storing, or uptaking and releasing, or storing and releasing or uptaking, storing and releasing at least one gas" (see claim 1).

Accordingly, it is believed that the disclosures of Fujiwara, Seki, or combinations thereof do not render the claimed invention obvious. It is respectfully requested that the Examiner acknowledge the same.

The rejection of claims 1 and 15 under 35 U.S.C. § 102(b) over Yaghi (US 5,648,508) is respectfully traversed.

Yaghi does not describe the method, as claimed in claim 1.

Yaghi describes a composition directed to "crystalline microporous solids which are prepared in a solution reaction by admixing certain metal salts with an organic ligand

containing multidentate functional groups or a mixture of organic ligands containing multidentate and monodentate functional groups in the presence of a templating agent" (col. 1, ll. 6-11). In particular, Yaghi describes the preparation and physical properties of a few selected metal-organic-frameworks (MOFs). Yaghi describes the structural characteristics of these compounds and notes their apparent pore sizes, but Yaghi does not describe the method as claimed in claim 1. Thus, Yaghi does not anticipate the claimed invention. It is kindly requested that the Examiner acknowledge the same and withdraw this rejection.

It is true that Yaghi suggest that MOFs may be employed in gas purification (col. 1, ll. 16-21 and col. 3, ll. 60-67). However, Yaghi does not suggest the method of claim 1, especially with regard to the "specific surface area, as determined via adsorption (BET according to DIN 66131) of larger than 2000 m<sup>2</sup>/g" (see claim 1). In the absence of a suggestion of the method of claim 1, it is believed that the claimed invention is unobvious in view of Yaghi's disclosure. However, should the Examiner still doubt Applicants' belief, Applicants kindly request that he view page 10, lines 30-33 of the disclosure of Fujiwara, which states that when a gaseous adsorbing-retaining agent that contains a metal complex, a bidentate organic ligand, which is shown to adsorb methane is used for adsorbing gases its surface area should not be greater than 1500 m<sup>2</sup>/g. Since Fujiwara is much more descriptive with respect to the adsorption of gases than is Yaghi, it can be inferred that the former is more authoritative in this matter than is the latter. Accordingly, it is requested that the Examiner recognize this "direct teaching away" to be applicable not only to an obviousness-analysis of the claimed invention with respect to Fujiwara's disclosure (see above), but to the obviousness-analysis with respect to Yaghi too. It is kindly requested that the Examiner deem the claimed invention to be unobvious in view of Yaghi's disclosure.

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It is believed that the present application is in a condition for allowance. In the event that the Examiner acknowledges the same, but believes that there are outstanding formal matters to be address; it is requested that he contact Applicants' undersigned representative at the below-listed telephone number.

Respectfully submitted,

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